

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A bulkhead panel for use in a combustion chamber of a gas turbine engine, said bulkhead panel comprising:

a first side and a second side;

a plurality of panel holes extending from said first side to said second side through which cooling air flows;

said first side and said second side being substantially planar from an outer edge to an inner edge; and

a circumferential rail on said first side dividing said first side into a first cavity region radially inward of said circumferential rail and a second cavity region radially outward of said first cavity region, said first cavity region containing a plurality of panel holes arrayed in a circular configuration and said second cavity region containing a plurality of said panel holes with at least one row of holes being circular and arranged concentric to said circular arrayed holes in said first cavity region; and

said second cavity region being an unbroken space defined by an inner rail, an outer rail, two side rails, and said circumferential rail.

2. (original) A bulkhead panel according to claim 1, wherein said first side comprises a cold side and said second side comprises a hot side exposed to combustion gases.

3. (currently amended) A bulkhead panel according to claim 1, wherein said panel holes in said first cavity region are arranged in a plurality of ~~circumferential~~ concentric rows.

4. (currently amended) A bulkhead panel according to claim 3, wherein said panel holes in said second cavity region are arranged in a plurality of ~~circumferential~~ circular rows.

5. (original) A bulkhead panel according to claim 1, wherein each of said panel holes has an exit nozzle which has a compound angle which includes an axial component and a radial component angled at an angle in the range of pure tangential to pure radial.

6. (original) A bulkhead panel according to claim 1, wherein each of said panel holes has an exit nozzle which is angled to create a swirling flow of cooling air.

7. (original) A bulkhead panel according to claim 6, wherein said swirling flow of cooling air created by said panel holes flows in a clockwise direction.

8. (original) A bulkhead panel according to claim 1, further comprising a plurality of posts on said first side for enabling said panel to be attached to a bulkhead support shell.

9. (original) A bulkhead panel according to claim 1, further comprising a center opening for receiving a fuel injector and a fuel injector guide.

10. (previously presented) A bulkhead panel according to claim 9, wherein said center opening has a central lip which defines said first cavity region with said inner circumferential rail and said first cavity region comprising a sealed chamber when said central lip and said inner circumferential rail are placed in contact with a bulkhead support shell.

11 - 12. (cancelled)

13. (original) A bulkhead panel according to claim 1, further comprising integrally formed inner and outer lips on said second side.

14. (original) A bulkhead panel according to claim 1, further comprising an outer edge, an inner edge, and a pair of radially extending side edges between said inner and outer edges.

15. (original) A bulkhead panel according to claim 14, wherein each of said outer and inner edges is curved and each of said radially extending side walls is linear.

16. (currently amended) A combustor for use in a gas turbine engine comprising:

an inner support shell and an outer support shell;

said inner support shell and said outer support shell  
defining a combustion chamber;

a bulkhead assembly including a bulkhead support shell and  
at least one panel attached to said bulkhead support shell;

said at least one panel having a first side and a second  
side, a plurality of panel holes extending from said first side  
to said second side through which cooling air flows, and a  
circumferential rail on said first side for dividing said first  
side into a first cavity region radially inward of said  
circumferential rail and a second cavity region radially outward  
of said first circumferential rail and radially outward of said  
first cavity region, said first cavity region containing a  
plurality of holes arranged in at least two circular rows and  
said second cavity region containing a plurality of panel holes  
with at least one row being arranged in a circular  
configuration; and

said first side and said second side being substantially  
planar from an outer edge to an inner edge.

17. (original) A combustor according to claim 16, further  
comprising:

a liner attached to each of said inner and outer support  
shells;

an annular cavity formed by said inner and outer support  
shells and said liners; and

inner and outer lips on said at least one panel for channeling air exiting said annular cavity toward a hot surface of said liners.

18. (original) A combustor according to claim 16, further comprising:

said at least one panel having a central opening; and

a fuel injector and a fuel injector guide projecting through said central opening.

19. (original) A combustor according to claim 16, further comprising means, on said first side, for securing said at least one panel to said bulkhead support shell.

20. (cancelled)

21. (original) A combustor according to claim 16, wherein each of said panel holes has an exit nozzle which has a compound angle which includes an axial component and a radial component angled at an angle in the range of pure tangential to pure radial.

22. (original) A combustor according to claim 16, wherein each of said panel holes has an exit nozzle configured to create a swirling flow of cooling air over said second side of said at least one panel.

23. (original) A combustor according to claim 16, wherein said at least one panel has an outer edge, an inner edge, and a pair

of radially extending side walls between said inner and outer edges.

24. (original) A combustor according to claim 23, wherein each of said outer and inner edges is curved and each of said radially extending side walls is linear.

25. (original) A combustor according to claim 23, wherein said second side has an outer lip and an inner lip and a surface which is substantially planar between said inner and outer lips.

26. (original) A combustor according to claim 16, further comprising a central opening in said at least one panel, said central opening being surrounded by a central lip, said central lip forming a boundary of said first cavity region, and said first cavity region comprising a first sealed chamber when said central lip and said inner circumferential rail are placed into contact with said bulkhead support shell.

27. (original) A combustor according to claim 26, further comprising said at least one panel having a peripheral rail forming a periphery of said second cavity region and said second cavity region comprising a second sealed chamber when said inner circumferential rail and said peripheral rail are placed into contact with said bulkhead support shell.

28. (original) A combustor according to claim 16, further comprising a plurality of impingement holes in said bulkhead support shell and said impingement holes being arranged to impinge air on said first side of said at least one panel

between adjacent ones of said panel holes and between adjacent rows of said panel holes.

29. (new) A bulkhead panel according to claim 1, wherein said circumferential rail is circular and said second cavity region borders one side of said circumferential rail and said first cavity region borders a second side of said circumferential rail.

30. (new) A combustor according to claim 16, wherein said second cavity region completely surrounds said first cavity region.

31. (new) A combustor according to claim 16, wherein said second cavity region is an unbroken area bordered by an inner rail, an outer rail, two side rails, and said circumferential rail.